



# UNITED STATES PATENT AND TRADEMARK OFFICE

W  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,981	04/22/2005	Hans-Olof Backlund	GROTH 3.3-036	2938
530	7590	06/27/2007	EXAMINER	
LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK 600 SOUTH AVENUE WEST WESTFIELD, NJ 07090			GRAYBILL, DAVID E	
			ART UNIT	PAPER NUMBER
			2822	
			MAIL DATE	DELIVERY MODE
			06/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/509,981	BACKLUND, HANS-OLOF	
<b>Examiner</b>	<b>Art Unit</b>		
David E. Graybill	2822		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 22 April 2005.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 22-42 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 22-42 is/are rejected.  
7)  Claim(s) \_\_\_\_\_ is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 04 October 2004 is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date *1 page*.  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. *\_\_\_\_\_*.  
5)  Notice of Informal Patent Application  
6)  Other:

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 35 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 35 there is insufficient antecedent basis for the language, "said first tabular resilient member."

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 22-42 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Bankes (6840470).

At column 2, line 59 to column 3, line 3; column 6, lines 32-37; column 7, line 58 to column 8, line

Re claim 22: A method of measuring stress forces in refiners including a pair of refining discs 310, 312 juxtaposed with each other and forming a

refining gap for refining material therebetween, said pair of refining discs including at least one refining surface including a plurality of bars 22 for refining said material within said refining gap, said at least one refining surface including a measuring surface 32 comprising a predetermined portion of said at least one refining surface including at least a portion of at least a pair of said plurality of bars, said method comprising resiliently mounting said measuring surface in said at least one refining surface and simultaneously measuring both the magnitude and direction of stress forces in the plane of said measuring surface.

Re claim 23: The method of claim 22 wherein said simultaneously measuring comprises measuring said stress forces in a first direction by means of a first force sensor and measuring said stress forces in a second direction by means of a second force sensor, said first direction being angularly displaced with respect to said second direction, and determining said magnitude and direction of said stress forces by measuring said stress forces in said first and second directions "Use of at least two sensor elements will permit both shear and normal forces to be resolved."

Re claim 24: The method of claim 23 wherein said simultaneously measuring comprises measuring said stress forces in a first direction by means of a first pair of first sensors 26 disposed opposite each other to provide counter-directed readings and measuring said stress forces in said

second direction by means of a second pair of second sensors 26 disposed opposite each other to provide counter-directed readings, said first pair of first sensors and said second pair of second sensors being disposed perpendicularly to each other.

Re claim 25: The method of claim 22 wherein said simultaneous measuring includes compensating for eccentric normal stress forces on said measuring surface "The apparatus can also include temperature gauges that can be used to compensate the measured stresses for thermal expansion of the bar" and "Suitably, the temperature is also measured at each measuring point, in order to enable compensation of the strain measurement for thermal expansion" (Johansson (5747707) column 3, lines 21-23, incorporated by reference).

Re claim 26: The method of claim 22 including measuring stress forces directed perpendicularly to said measuring surface.

Re claim 27: The method of claim 26 wherein said measuring of said stress forces directed perpendicularly to said measuring surface includes combining the force exerted by steam pressure inside said refiner and the force exerted by fiber pressure from said refining material "The temperature gauges can also be used to determine the pressure and velocity of steam supplied, as a function of the radius of the refining disk" (Johansson (5747707) column 3, lines 23-26, incorporated by reference).

28: The method of claim 26 wherein said measuring of said stress forces directed perpendicularly to said measuring surface includes measuring the force exerted by fiber pressure from said refining material and compensating for the force exerted by steam pressure inside said refiner "The temperature gauges can also be used to determine the pressure and velocity of steam supplied, as a function of the radius of the refining disk" (Johansson (5747707) column 3, lines 23-26, incorporated by reference).

Re claim 29: The method of claim 23 wherein said simultaneous measuring of both said magnitude and said direction of said stress forces in said plane of said measuring surface comprises calculating both said magnitude and direction from said first and second force sensors, and including controlling said refining process based thereon.

Re claim 30: Apparatus for measuring stress forces in refiners including a pair of refining discs juxtaposed with each other and forming a refining gap for refining material therebetween, said pair of refining discs including at least one refining surface including a plurality of bars for refining said material within said refining gap, said at least one refining surface including a stress measuring member comprising a measuring surface comprising a predetermined portion of said at least one refining surface including at least a portion of at least a pair of said plurality of bars, said stress measuring member being resiliently mounted in said at least one

refining surface and comprising at least a first set of force sensors for simultaneously measuring both the magnitude and direction of stress forces in the plane of said stress measuring member.

Re claim 31: The apparatus of claim 30 including compensating means 26 and "temperature gauges" for compensating for eccentric normal forces in said plane of said stress measuring member that will effect said measuring.

Re claim 32: The apparatus of claim 30 including an additional stress measuring member for measuring stress forces perpendicular to said stress measuring member.

Re claim 33: The apparatus of claim 30 wherein said first set of force sensors comprises a first force sensor for measuring said stress forces in a first direction and a second force sensor for measuring said stress forces in a second direction, said first direction being angularly displaced with respect to said second direction, whereby said magnitude and direction of said stress forces in said plane of said stress measuring member are determined from the readings of each of said first and second force sensors.

Re claim 34: The apparatus of claim 33 wherein said first set of force sensors includes a pair of said first force sensors for measuring said stress forces in said first direction and a pair of said second force sensors for measuring said stress forces in said second direction.

Re claim 35: The apparatus of claim 30 wherein said stress measuring member comprises a first body connecting said first set of force sensors to said stress measuring member, said first body comprising a first tubular resilient member 28 disposed around the central axis of said stress measuring member, said first set of force sensors being disposed on said first tabular resilient member.

Re claim 36: The apparatus of claim 30 wherein said stress measuring member includes a second set of force sensors 26.

Re claim 37: The apparatus of claim 36 wherein said stress measuring member comprises a second body 28 connecting said second set of force sensors to said stress measuring member, said second body comprising a second tubular resilient member disposed around the central axis of said stress measuring member, said second set of force sensors being disposed on said second tubular resilient member.

Re claim 38: The apparatus of claim 37 wherein said second set of force sensors and said second body comprise compensating means 26 and "temperature gauge" for compensating for eccentric normal forces.

Re claim 39: The apparatus of claim 35 including an additional stress measuring member 26 for measuring stress forces perpendicular to said stress measuring member, said additional stress measuring member

comprising at least three force sensors disposed on said first tubular resilient member.

Re claim 40: The apparatus of claim 37 including an additional stress measuring member for measuring stress forces perpendicular to said stress measuring member, said additional stress measuring member comprising at least three force sensors disposed on said second tubular resilient member.

Re claim 41: The apparatus of claim 32 wherein said additional stress measuring member comprises means for measuring the stress force exerted perpendicular to said stress measuring member.

Re claim 42: The apparatus of claim 30 wherein said first set of force sensors comprise "strain gauges" and "As used herein, the term 'sensor element' is intended to mean any transducer that can produce a signal (e.g., an electrical charge or an electrical signal such as voltage or current) in response to loading (e.g., compression). An example of a sensor element is a piezo electric element, such as a piezo-ceramic element. While the invention is described below primarily with respect to piezo electric elements, it is to be understood that the invention is not limited thereto."

Although Bankes explicitly discloses compensating means 26 and "temperature gauges" for compensating for eccentric normal forces in said plane of said stress measuring member that will effect said measuring, the language "for compensating for eccentric normal forces in said plane of said

stress measuring member that will effect said measuring" is a statement of intended use of the apparatus that does not appear to result in a structural difference between the claimed apparatus and the apparatus of Bankes. Further, because the apparatus of Bankes appears to have the same structure as the claimed apparatus, it appears to be capable of being used for the intended use, and the statement of intended use does not patentably distinguish the claimed apparatus from the apparatus of Bankes. The manner in which a product operates is not germane to the issue of patentability of the product; Ex parte Wikdahl 10 USPQ 2d 1546, 1548 (BPAI 1989); Ex parte McCullough 7 USPQ 2d 1889, 1891 (BPAI 1988); In re Finsterwalder 168 USPQ 530 (CCPA 1971); In re Casey 152 USPQ 235, 238 (CCPA 1967). Also, "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim."; Ex parte Thibault, 164 USPQ 666, 667 (Bd. App. 1969). And, "Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims."; In re Young, 25 USPQ 69 (CCPA 1935) (as restated in In re Otto, 136 USPQ 458, 459 (CCPA 1963)). And, claims directed to product must be distinguished from the prior art in terms of structure rather than function. In re Danley, 120 USPQ 528, 531 (CCPA 1959). "Apparatus claims cover what a device is, not what a device does [or is intended to do]." Hewlett-Packard Co. v.

Bausch & Lomb Inc., 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). Indeed, in the specification, at paragraph 40, applicant discloses that the mere provision of the claimed sensors enables the intended use of the sensors.

Similarly, in claim 22, the language, "for refining material," and, "for refining said material within said refining gap therebetween"; in claim 30, the language, "for measuring stress forces in refiners," "for refining material therebetween," "for refining said material within said refining gap," and "for simultaneously measuring both the magnitude and direction of stress forces in the plane of said stress measuring member"; in claim 31, the language, "for compensating for eccentric normal forces in said plane of said stress measuring member that will effect said measuring"; in claim 32, the language, "for measuring stress forces perpendicular to said stress measuring member"; in claim 33, the language, "for measuring said stress forces in a first direction," and, "for measuring said stress forces in a second direction"; in claim 34, the language, "for measuring said stress forces in said first direction," and, "for measuring said stress forces in said second direction"; in claim 38, the language, "for compensating for eccentric normal forces"; in claim 39, the language, "for measuring stress forces perpendicular to said stress measuring member"; in claim 40, the language, "for measuring stress forces perpendicular to said stress measuring member"; and, in claim 41, the language, "for measuring the stress force

exerted perpendicular to said stress measuring member," is statements of intended use of the invention that do not appear to result in a manipulative or structural difference between the claimed invention and the invention of Bankes. Further, because the invention of Bankes appears to have the same structure as the claimed invention, it appears to be capable of being used for the intended uses, and the statements of intended use do not patentably distinguish the claimed invention from the invention of Bankes. The manner in which a product operates is not germane to the issue of patentability of the product; Ex parte Wikdahl 10 USPQ 2d 1546, 1548 (BPAI 1989); Ex parte McCullough 7 USPQ 2d 1889, 1891 (BPAI 1988); In re Finsterwalder 168 USPQ 530 (CCPA 1971); In re Casey 152 USPQ 235, 238 (CCPA 1967). Also, "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim.;" Ex parte Thibault, 164 USPQ 666, 667 (Bd. App. 1969). And, "Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims.;" In re Young, 25 USPQ 69 (CCPA 1935) (as restated in In re Otto, 136 USPQ 458, 459 (CCPA 1963)). And, claims directed to product must be distinguished from the prior art in terms of structure rather than function. In re Danley, 120 USPQ 528, 531 (CCPA 1959). "Apparatus claims cover what a device is, not what a

device does [or is intended to do]." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990).

The art made of record and not applied to the rejection is considered pertinent to applicant's disclosure. It is cited primarily to show inventions relevant to the examination of the instant invention.

**For information on the status of this application applicant should check PAIR:**  
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Alternatively, applicant may contact the File Information Unit at (703) 308-2733. Telephone status inquiries should not be directed to the examiner. See MPEP 1730VIC, MPEP 203.08 and MPEP 102.**

Any other telephone inquiry concerning this communication or earlier communications from the examiner should be directed to David E. Graybill at (571) 272-1930. Regular office hours: Monday through Friday, 8:30 a.m. to 6:00 p.m.  
The fax phone number for group 2800 is (571) 273-8300.



David E. Graybill  
Primary Examiner  
Art Unit 2822

D.G.  
20-Jun-07